

SUMMARY: The Service designates critical habitat for the Maryland darter (*Etheostoma sellare*) by this final rule. Self-sustaining populations of this fish species are now believed to exist only in two small segments of streams in Harford County, Maryland. The Maryland darter was listed as Endangered on March 11, 1967 (32 FR 4001), and is protected under the provisions of the Endangered Species Act of 1973, as amended. Critical habitat was not designated at the time of listing. The present action, based on recommendations of Service biologists, the State of Maryland, and a recovery team, specifies 2.8 miles of 2 streams that are considered critical to survival of this fish. Federal actions that may affect the areas designated are subject to consultation with the Service, pursuant to Section 7(a)(2) of the Endangered Act of 1973, as amended.

DATE: The rule becomes effective on September 28, 1984.

ADDRESS: Comments and materials relating to the rule are available for public inspection by appointment during normal business hours at the Service's Office of Endangered Species, Suite 500, 100 North Glebe Road, Arlington, Virginia.

FOR FURTHER INFORMATION CONTACT: Mr. John L. Spinks, Jr., Chief, Office of Endangered Species, Department of the Interior, Washington, D.C. 20240, (703/235-2771).

SUPPLEMENTARY INFORMATION:

Background

The Maryland darter is a small (2 to 3 inch) member of the freshwater perch family (Percidae) of fishes. Individuals have been observed in and near rock crevices and similar shelters in clean, well-oxygenated, swiftly flowing parts of streams (the riffle habitat), and have seldom been seen or collected in even the nearby quiet parts of streams. Like most darters, they remain usually on or near the bottom, whereby they dart quickly from shelter to shelter. They feed mostly on small riffle insects, snails and other invertebrates. Exact life history details have been difficult to obtain for this rare species; related species survive poorly often fail to reproduce if confined to still water, or even in flowing streams where bottom crevice shelters have been eliminated by siltation.

The species was first described in 1912, based on two specimens from Swan Creek in Harford County, Maryland. It has apparently been subsequently extirpated from Swan Creek itself, and has not been collected in widespread regional stream surveys

since 1962, except in two stream segments. Gashey's Run, known also as Gashey's Creek, is a small stream tributary to Swan Creek. It may support a breeding population of Maryland darters, since individuals have been found in it from time to time. A second population appears to be sustaining itself in the lower mile or so of Deer Creek, another stream nearby. In 1973, Deer Creek was designated a scenic river by an act of the State Legislature under the Maryland Wild and Scenic Rivers Act of 1968. Experimental approaches to learning exact habits of this fish are hampered by its extreme rarity, and by fears that removing any individuals for tests might have adverse effects on the species.

The Maryland darter was listed as endangered on March 11, 1967 (32 FR 4001). A proposal to determine critical habitat for the species was published in 1978 (43 FR 20518). It was subsequently withdrawn by the Service (44 FR 12382), in accordance with the Endangered Species Act Amendments of 1978, which established specific procedures the Service must follow when designating critical habitat. A reproposal conforming with these amendments was published August 28, 1980 (45 FR 57680). The reproposal summarized biological, environmental and economic information available to the Service regarding the known habitats of the Maryland darter, and solicited comments, suggestions, objections and factual information from any interested persons. A letter was sent to the Governor of Maryland on September 9, 1980, notifying him of the proposed rule. On September 17, 1980, letters were mailed to appropriate Federal agencies, local governments and other interested parties notifying them of the proposal and soliciting their comments and suggestions. Eighteen official letters of comment were received from six Federal agencies, the interstate Susquehanna River Basin Commission, and representatives of nine Maryland State regulatory or advisory bodies. Federal agencies responding included the Environmental Protection Agency, Department of Transportation, U.S. Army, U.S. Navy, U.S. Air Force, and the Heritage Conservation and Recreation Service. State agencies responding directly included the Governor of Maryland, his Advisory Commission for Susquehanna State Park, the Maryland Department of Natural Resources, with separate comments from the Tidewater Administration, Water Supply and Capital Programs divisions, the Maryland Department of Transportation, and the State

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Endangered Maryland Darter

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

Clearinghouse, the latter transmitting input from divisions of Agriculture, Environmental Programs, Economic and Community Development and the Regional Planning Council. A public meeting regarding the proposal was held on September 30, 1980, at Aberdeen Proving Ground, Maryland. The information upon which this rule is based was determined by the Service to have continuing validity in a review conducted during June 1984.

Summary of Comments and Recommendations

In the August 28, 1980, *Federal Register* proposed rule (45 FR 57680) and associated September 17, 1980, press releases, all interested parties were invited to submit factual reports or information which might contribute to the formulation of a final rule. Earlier letters sent out June 2, 1980, to several Federal and State Agencies requesting suggestions and economic information, elicited responses which were also treated as official comments. Two private individuals commented in letters supporting the proposed rule. All comments received have been considered in the formulation of the final rule. A total of 19 comments received in this period and an earlier comment dated July 10, 1978, in response to the earlier proposal of critical habitat for the Maryland darter, are summarized below.

The Governor of Maryland indicated support for the designation of critical habitat for this rare fish, and expressed concern that the area proposed by the Service for designation is smaller than the area recommended for such designation by the Maryland Department of Natural Resources. He expressed the hope that if a survey recommended in the Recovery Plan for the Maryland darter shows the range to be more extensive than currently believed, the Service will take swift action to extend the designated area to provide additional protected habitat and potential areas for habitat expansion. The Service wishes to reassure the Governor that it will not hesitate to take such action if additional biological data so indicate. In regard to the area designated by this rule, the Governor is referred to the more detailed discussion in response to comments from the Maryland Darter Recovery team Leader.

The Acting Chairman of the Governor's Advisory Committee, the Superintendent of Susquehanna State Park, stated that the proposal has been reviewed by the Committee, but made no specific recommendations. He advised that the designated segment of Deer Creek was under consideration by

Harford County as a possible water supply source. The Chief of the Water Supply Division of Maryland Water Resources Administration, however, indicated in his comments that Harford County had made a recent decision to obtain additional water supplies from the lower Susquehanna River at the existing Havre de Grace water treatment plant. In further comments, the latter reminded the Service that a document entitled *Water Allocation for Deer Creek* has been prepared by his agency, giving preliminary estimates of the minimum flow needed to avoid probable adverse impacts on darter habitat. The document, cited below, summarizes present and projected water uses in relation to measured stream discharges for the past several decades. The commenter also stated that his agency has no knowledge of federally funded or sponsored withdrawal projects or other existing or planned water uses for Gashey's Run.

The Regional Planning Council, a consortium of State and local agencies, endorsed a review and referral memorandum certifying that the proposed designation had undergone review and comment by representatives of the affected member agencies. The summary comment was that the designation is consistent with the General Development Plan, and should prevent Federal actions from degrading water quality (especially with respect to sediment loads) of parts of Deer Creek and Gashey's Run. Attached endorsements were signed by the Executive Director, the Planning Director, and by a representative of Harford County Planning and Zoning Commission. A similar umbrella review was transmitted by the State Clearinghouse, stating that the designation is not inconsistent with State plans, programs and objectives as of this date. The review included input from State Departments of Agriculture, Economic and Community Development (including Historical Trust Section), Office of Environmental Programs, Department of Transportation, Baltimore Regional Planning Council, Harford County, and Clearinghouse management staff. Capital Programs Administration of the Maryland Department of Natural Resources provided a separate letter supporting the establishment of critical habitat as necessary to help protect the fish, and calling attention to the Deer Creek management plan (cited below under References), prepared under the Maryland Wild and Scenic Rivers Act.

The Chief of the Region 3 Office, U.S. Environmental Protection Agency,

furnished excerpts from a draft waste water facilities planning study for an area that includes lower Gashey's Run. The stream area itself is identified in study as a sensitive area, however, as the letter states that direct impacts or from construction or development are not anticipated.

A memorandum transmitted from the Regional Director, Northeast Region of the Heritage Conservation and Recreation Service (whose functions are now performed by the National Park Service) through the Director of that agency, outlines criteria under which Deer Creek has been identified as a potential Wild and Scenic River for possible designation in accordance with the provisions of the Wild and Scenic Rivers Act, Pub. L. 90-542. The identification and the proposed critical habitat designation were suggested to constitute complimentary Federal actions.

Officials of the United States Navy and United States Air Force responded commenting that their agencies have planned or ongoing activities likely to affect the designated areas, and no objections to the designations. Aberdeen Proving Ground of the United States Army, in letters of July 10, 1978, and reiterated comments through the Office of the Chief of Engineers, dated August 7, 1980, states that Deer Creek is its sole source of water supply, and that any required changes in drawdown quantities could impact upon the installation. The commenters further stated that alternative sources of water are not immediately available, and that the cost of developing such alternate sources would impact budget requirements. In response, the Service notes that average streamflow provides more than three times the average estimated combined minimum requirements of APG and the darter habitat except at times of low water. Severe periods of low flow have historically been rare and of short duration, but it could be expected to increase in frequency and severity should future development and deforestation in the watershed shorten the time constant of water discharge. Guidelines, under which the multiple interstate uses for Deer Creek can be optimized for all users, are codified in CFR Part 803 in regulation of the Susquehanna River Basin Commission. Other Army activities with potential impact on Deer Creek specified in the comments received are expected to have negligible impact on the designated area. A problem of sedimentation at Churchville Test Course was solved means of a silt control project in 198

The Susquehanna River Basin Commission, and the Baltimore District, Corps of Engineers, in a letter forwarded through that Commission, stated that there are presently no Federal projects within their jurisdictions in the designated areas. The Executive Director of the Commission summarized its review authority as: waste-water discharge permits; encroachment permits; groundwater withdrawals in excess of 0.1 mgd (million gallons per day); surface water withdrawals in excess of 1.0 mgd; and consumptive uses in excess of 0.02 mgd. The Commission also exercises certain other powers, including emergency powers in times of drought. The letter from the Corps of Engineers stated that only a long-pending project to repair Wilkinson Bridge over Elbow Branch appears to require a consultation under Section 7 of the Endangered Species Act, if formally submitted for this review. The commenter indicated an opinion that strong conservation measures are needed to upgrade the existing habitat if the Maryland darter is to survive.

In a letter of general comment, the Associate Administrator for Right-of-Way and Environment of the Federal Highway Administration noted the reduction in length of the designated segment of Deer Creek between the 1978 critical habitat proposal and the 1980 proposal. He expressed the opinion that this was a positive step that would reduce the potential for conflict with routine maintenance procedures on a highway bridge no longer included within the designated area. The Service does not agree with this interpretation of the provisions of Section 7 of the Act. If, after consultation with the Service, Federal activities are considered not likely to adversely modify or destroy the critical habitat for a listed species, they can be conducted as freely within the designated areas, as elsewhere. On the other hand, designation of critical habitat does not obviate the need for Federal agencies to continue to evaluate effects on endangered species that might result from activities outside such designated areas. This responsibility stems from the "jeopardy" prohibition set forth in Section 7(a)(2) of the Act.

A final letter of comment was received from the leader of the Maryland Darter Recovery Team, who is with the Tidewater Administration of the Maryland Department of Natural Resources. He stressed that many of the features that have enabled the Maryland darter to survive best at the Stafford Bridge riffle of Deer Creek remain unknown. He suggested that factors possibly affecting these features include:

(a) Increased uncompensated water withdrawals from Aberdeen Proving Ground (APG) or by other users, (b) sediment production from APG Churchville Test Course, agriculture urban runoff or other sources, (c) sewage effluent from all sources, and (d) other pollution from point or distributed sources, such as animal waste, pesticides, herbicides, etc. He advocated establishment of at least an upstream buffer zone as an area for possible future population expansion, within which potentially damaging factors would receive more careful scrutiny by the responsible agencies, and in which at least some protective dilution could occur. The Service agrees that these are all factors requiring scrutiny in regard to their potential effects on the Maryland darter. However, the function of the present rule is to identify those areas considered critical to the survival of the species, upon which activities likely to have an adverse effect are to be avoided. Designating additional area upstream from the specified zones in either stream as areas for reasonable expansion could be considered once the best scientific information available indicated the darters were capable of moving and surviving there, which it presently does not. Improvements of the scientific data might permit the presently known features to be identified in nearby streams such as Swan Creek, and future actions to be initiated to restore the Maryland darter to more of its probable historic range.

Critical Habitat

Critical habitat, as defined by Section 3 of the Act means: (i) areas within the geographical area occupied by the species, at the time that the species is listed, which are (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by the species at the time of listing, upon a determination by the Secretary that such areas are essential for the conservation of the species.

Section 4(a)(3) of the Act requires that critical habitat be designated to the maximum extent prudent and determinable. Critical habitat is being designated for the Maryland darter to include 2.8 miles of 2 streams, Deer Creek and Gashey's Run in Harford County, Maryland. Based on data presently available, the designated Deer Creek area appears to include sufficient area for individual and population growth and for normal behavior. Immature fish have been collected in the Gashey's Run area and it may support a breeding population. Riffle and pool

areas in both streams provide habitat for aquatic insects and snails, the Maryland darter's food. Large gravel and cobbler in the streams provide cover for the Maryland darter. Although reproduction has not been observed directly, it is presumed to occur in these streams, since the fish have not been taken elsewhere. These streams and Swan Creek are the only habitats known to represent the historic distribution of the species.

The listing regulations further require that, when considering the designation of critical habitat, the Service should describe the biological and physical constituent elements within the defined area that are essential to the conservation of the species and that may require special management considerations or protections. Known primary constituent elements are to be listed with the critical habitat description. The following elements are known or believed to be constituent elements in the designated critical habitat of the Maryland darter:

1. *Continuity and sufficiency of stream flow.* Like most fishes, this one could not be expected to survive removal of all water from its habitat for more than a few minutes.

2. *Permanence of riffle habitat.* Like many other darters, this one shows evidence of permanent residence in the shallower, swifter segments of streams. Both reproduction and ultimately survival can reasonably be predicted to be adversely affected if the population is forced by low water into stagnant or even still pools for prolonged periods. This constraint probably holds for most organisms that are the darter's natural food.

3. *Pollution sensitivity.* Coupled with most darters' preference for swift water is a high oxygen requirement, making darters among the first fishes to show respiratory stress and failure with any reduction of oxygen availability. Selective mortality of darters in habitats subjected to various other kinds of pollution is also documented.

4. *Presence and quality of cover.* Darters inhabiting riffles are known to use crevices among stones, smaller pebbles, vegetation or trapped wood flotsam both for cover from their predators and for spawning and egg protection. They have been noted to disappear from riffles when silt deposition eliminated such crevices. Darter eggs have been shown to be particularly vulnerable to smothering by silt, so that even less siltation can normally be tolerated during the spawning season.

Section 4(b)(8) requires, for any proposed or final regulation that designates critical habitat, a brief description and evaluation of those activities (public or private) which may adversely modify such habitat or may be affected by such designation. The following is a description of such activities.

At present, the regional water use planning for Deer Creek by the Susquehanna River Basin Commission and by the Maryland Department of Natural Resources seems to make adequate provision for probable needs of the Maryland darter as well as equitable allocation among interstate human needs. Water drawdown by Aberdeen Proving Ground could, during times of extreme drought, conceivably adversely affect the designated area by forcing darters into pool areas for extended periods. Severe periods of low flow, however, have been historically rare and of short duration. APG has enough well capacity to operate without and Deer Creek water for 3 days under emergency conditions, but supply from its wells or locally purchased water is not sufficient to maintain operations on a regular basis.

Construction of dams or other structures traversing Deer Creek that would impound the stream segments designated as critical habitat would almost certainly destroy the Maryland darter population. Impoundments upstream could adversely change temperature relationships within the stream. However, the State of Maryland, through State legislative action designating Deer Creek a Wild and Scenic River, has signified a desire for minimum alteration of that stream.

Activities involving the introduction of chemicals, organic waste matter of silt into the streams comprising the critical habitat may adversely affect such areas. Special sensitivities to these factors have been suggested by work on other species (see above). Because some of those activities are not Federal activities *per se*, or federally authorized or funded actions, they will not be affected by the critical habitat designation. Critical habitat for the Maryland darter is located on Deer Creek and Gashey's Run (also known as Gashey's Creek) in the eastern part of Harford County, Maryland.

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of specifying a particular area as critical habitat. The Service has prepared an economic analysis and evaluated such area that was proposed in the light of all additional information obtained. The only activity having Federal involvement that might

conceivably be affected by or affect the critical habitat designation is water withdrawal by the Aberdeen Proving Ground (APG), U.S. Army under low flow or drought conditions. Such conditions have been historically rare and APG's withdrawal may never affect or be affected by the designation.

Available Conservation Measures

Section 7(a)(2) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is listed as endangered or threatened and with respect to its critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402, and are now under revision (see proposed rule at 48 FR 29990; June 29, 1983).

This rule requires Federal agencies not only to insure that activities they authorize, fund or carry out are not likely to jeopardize the continued existence of the Maryland darter, but also requires them to insure their actions are not likely to result in the destruction or adverse modification of this critical habitat.

Endangered status of the Maryland darter under the provisions of Section 4(a)(1) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) is not affected by this designation of its critical habitat.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined by the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to Section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

Regulatory Flexibility Act and Executive Order 12291

The Department of the Interior has determined that designation of critical habitat for this species will not constitute a major action under Executive Order 12291 and certifies that this designation will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). These determinations are based on a Determination of Effects that is available at the U.S. Fish and Wildlife Service, Office of Endangered Species, 1000 North Glebe Road, Arlington, Virginia. The rule is not expected to affect costs or prices in any way. No direct costs, enforcement costs,

or information collection and recordkeeping requirements are imposed on small entities by this rule. This rule contains no recordkeeping or information collection requirements as defined by the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*

Literature Cited

- Dietman, A., and D. Schultz. 1978. Water allocation guidelines for Deer Creek. Unpublished staff report, Maryland Department of Natural Resources, prepared under contract with U.S. Fish and Wildlife Service. 73 pp.
- Harford County Advisory Board and Department of Natural Resources. 1979. Deer Creek Scenic River, Revised Edition. Maryland Department of Natural Resources, Annapolis, 68 pp., 8 maps.
- Knapp, L. 1976. Redescription, relationships and status of the Maryland darter, *Etheostoma sellare* (Radcliff and Welsh), an endangered species. *Proc. Biol. Soc. Washington* 89(6):99-117.
- Knapp, L., W.J. Richards, R.V. Miller, and N.R. Foster. 1963. Rediscovery of the percid fish *Etheostoma sellare* (Radcliff and Welsh). *Copeia* 1963(2):455.
- Radcliff, L., and W.W. Welsh. 1913. Description of a new darter from Maryland. *Bull. U.S. Bur. Fish.* 32(1912):29-32.

Author

The author of this rule is Dr. George E. Drewry, Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. (703/235-1975).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations is amended as set forth below:

1. The authority citation for Part 17 reads as follows:

Authority. Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Amend § 17.95(e) Fishes by adding critical habitat of the Maryland darter after that of the leopard darter as follows:

§ 17.95 Critical habitat—fish and wildlife.

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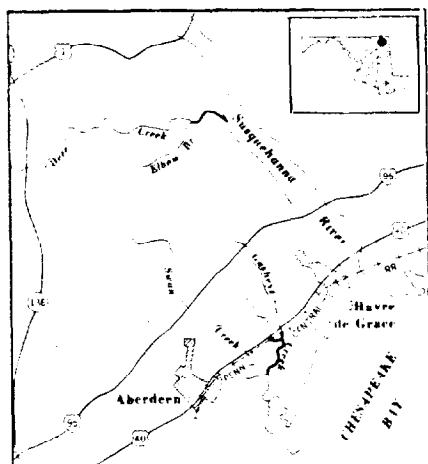
(e) *Fishes.*

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Maryland Darter (*Etheostoma sellare*)

Maryland (Harford County): (1) Deer Creek main channel from the junction with Elbow Branch thence downstream to the junction

with the Susquehanna River. (2) Gasheys Run (also known as Gasheys Creek) main channels of east and west forks from their overcrossing by old Penn Central Railroad (presently titled to National Railroad Passenger Corporation, Amtrak) south to their confluence, thence south to the confluence with Swan Creek.



Constituent elements of this habitat are considered to be quality and permanence of streamflow in shallow areas of the streams (riffles), and presence of unsilted rocky crevices for shelter and production of aquatic insects and snails for food.

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Dated: August 6, 1984.

G. Ray Arnett,

Assistant Secretary for Fish and Wildlife and Parks.

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